

Socio-Cultural Considerations in Effects Based Planning, CSER 2008

Armin A. Blueggel

Air Force Research Laboratory
Warfighter Readiness Research Division
Mesa, AZ
armin.blueggel@mesa.afmc.af.mil

Lee S. Krause, Gary Aldrich

Securboratorion, Inc.
1344 South Apollo Blvd. Suite 400
Melbourne, FL 32901
lkrause@securboratorion.com
galdrich@securboratorion.com

Abstract

Military conflicts have been changing from the traditional large force engagements, where the winners are decided by who has the most men left standing, to unconventional asymmetric warfare where a military force can win every battle but still lose the war. Warfare is evolving, partly due to the technology that is being leveraged by the military. Advanced targeting capabilities and precision guided weapons, like the Joint Direct Attack Munitions (JDAM), give commanders in the field the capability to strike a target at any time and virtually ensure its destruction or neutralization. This capability has led to a new way of thinking and targeting called Effects Based Operations (EBO). EBO focuses solely on achieving operational objectives rather than inflicting kinetic damage. This relatively new way of thinking is conducive to the consideration of socio-cultural factors, but unfortunately our operational level planners have not been taught how to do this. Our operations and planning have traditionally been approached from a Western, Anglo-American perspective. Planners don't have a clear understanding of how tactical level actions will be perceived by the local population, and how those perceptions could negatively impact the attainment of the overall military objectives. Plans that are developed without the consideration of socio-cultural differences will more often than not lead to additional friction, impacting the overall timeline for accomplishing the mission. This is all too common and can be witnessed by watching the nightly news.

In order to support the warfighter and improve upon the military's ability to efficiently achieve their objectives, the Air Force Research Laboratory and Securboratorion have developed a cultural awareness training tool for the Air Operations Center (AOC). The Cultural Awareness Trainer for Operational Planners (CATOP) is an Office of the Secretary of Defense (OSD) funded effort that will teach operational-level planners how to recognize and anticipate effects of an opposing group's different socio-cultural characteristics. This paper will discuss the concepts driving the CATOP program, the various socio-cultural factors that impact military operations, and the positive impacts CATOP will have on effects based operations.

CATOP program concepts

Recent history has forced the U.S. military to re-evaluate the way conflicts are planned and executed. Plans which emphasize attrition are not feasible for current urban battlefields where

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14. ABSTRACT

Military conflicts have been changing from the traditional large force engagements, where the winners are decided by who has the most men left standing, to unconventional asymmetric warfare where a military force can win every battle but still lose the war. Warfare is evolving, partly due to the technology that is being leveraged by the military. Advanced targeting capabilities and precision guided weapons, like the Joint Direct Attack Munitions (JDAM), give commanders in the field the capability to strike a target at any time and virtually ensure its destruction or neutralization. This capability has led to a new way of thinking and targeting called Effects Based Operations (EBO). EBO focuses solely on achieving operational objectives rather than inflicting kinetic damage. This relatively new way of thinking is conducive to the consideration of socio-cultural factors, but unfortunately our operational level planners have not been taught how to do this. Our operations and planning have traditionally been approached from a Western, Anglo-American perspective. Planners don't have a clear understanding of how tactical level actions will be perceived by the local population, and how those perceptions could negatively impact the attainment of the overall military objectives. Plans that are developed without the consideration of socio-cultural differences will more often than not lead to additional friction, impacting the overall timeline for accomplishing the mission. This is all too common and can be witnessed by watching the nightly news. To support the warfighter and improve upon the military's ability to efficiently achieve their objectives, the Air Force Research Laboratory and Securboration have developed a cultural awareness training tool for the Air Operations Center (AOC). The Cultural Awareness Trainer for Operational Planners (CATOP) is an Office of the Secretary of Defense (OSD) funded effort that will teach operational-level planners how to recognize and anticipate effects of an opposing group's different socio-cultural characteristics. This paper discusses the concepts driving the CATOP program, the various socio-cultural factors that impact military operations, and the positive impacts CATOP will have on effects based operations.

15. SUBJECT TERMS

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adversaries are co-located in civilian regions. In conflicts such as Operation Iraqi Freedom (OIF) and Operation Enduring Freedom (OEF), where we are facing asymmetric adversaries, the destruction of power plants, transportation routes, factories, and other ‘targets’ shared by civilians, frustrates the local populace and plays into the hands of our adversaries. Instead, focus has shifted from pure attrition to achieving specific operational effects defined in an Effects-Based Plan (EBP). However, achieving desired effects often requires support from the local populace, and ultimately their support is influenced by indigenous socio-cultural factors. Our adversaries have been cognizant of this and have used socio-cultural knowledge to gain support for their cause and diminish coalition support. The role that culture plays in the 21st century battlespace is eloquently described by Professor Colin Gray in his article, “The Character of Irregular Warfare”:

*“Culture refers to social capital. It means the beliefs, attitudes, habits of mind, and preferred ways of behaviour of a social group. And...**irregular wars are won or lost in the minds of the local people**. If we do not understand what is in those minds, what they value and how much they value it, success secured against terrorists and other insurgents will most likely be only temporary. Culture is crucial, both ours and theirs. ‘Theirs’ for the obvious reason just outlined; restated, **the local people decide who wins**. ‘Ours’ because we can approach and seek to understand other cultures only through the inevitably distorting prism of our own.”* (Gray 2006)

Unfortunately, current training for socio-cultural considerations is ad hoc at best and, for the most part non-existent. Military services are starting to address the shortfall in socio-cultural awareness, in a general sense, through their respective professional military education schools (McFate 2005). Unfortunately, lessons are more often a ‘Monday morning quarterback’ type of analysis, focused on specific historic examples of how we could have better considered an adversary’s socio-cultural factors. There is insufficient training available to teach operational-level planners how to recognize, ahead of time, the significance of socio-cultural factors and understand how they impact the entire area of operations – including all significant groups acting in the operational environment.

While it is important to rhetorically understand the significance of culture, if the U.S. is to be successful against asymmetric adversaries, socio-cultural considerations must be included early in the planning process in a practical way. AOC planners tasked with planning at the operational level of war must take socio-cultural factors into consideration as one of their first steps in the planning process. This must occur during either Deliberate or Crisis Action Planning as they go through the Military Decision Making Process (MDMP), or for Air Component planners, the Joint Air Estimate Process (JAEP).

In either case critical socio-cultural factors deemed most important for consideration in military operations must be incorporated into every planning scenario. Planners must be trained to change their mindset to consider socio-cultural factors and ask questions such as:

1. What are the strongest/most unique, aspects of our own culture in this scenario?
2. What are the strongest/most unique aspects of the various other cultures in the operational environment (e.g. allies, adversaries, host country, Non-combatants, etc...)?
3. Where are the greatest differences between these cultures (i.e. theirs and ours)?

CATOP enables these questions to be objectively answered by AOC planners within the context of their EBP.

CATOP Concept of Operations

The primary goal of CATOP is to teach operational-level planners in the AOC how to recognize and anticipate the effects of an opposing group's different socio-cultural characteristics. The concept developed by the Securboration Team consists of a *consider-modify-simulate-evaluate* cycle with respect to infusing a plan with socio-cultural values. This is depicted in Figure 1, and is summarized as follows:

1. Socio-cultural factors are objectively identified and quantified based on current research, historical perspective, and battlespace evidence. The factors are *considered* in the plan development process.
2. Students *modify* the current plan based on their progressive knowledge of socio-cultural factors. This includes modifying and/or adding tactical tasks and other plan elements.
3. The plan is *simulated* within a socio-cultural framework.
4. Results of the plan simulation are objectively presented to students to *evaluate* the effect their cultural-based plan adjustment had on the campaign.

The 'consider-modify-simulate-evaluate' approach shown in Figure 1 can be iteratively continued to determine the optimum plan to achieve the Commander's desired end state taking into account the impact different socio-cultural factors have on a campaign. CATOP contains modular components to implement each of these required capabilities which maximizes use of existing assets and ensures a smooth transition into the training community, and eventually the operational community. This approach also enables flexibility to address and evolve with training approaches and preferences. For example, CATOP allows variations in teaching styles. Students can train and learn in a free-play (consider-modify-simulate-evaluate cycle) mode, or be forced to come up with recommended optimum adjustments, and then have an instructor review/grade the results in a test mode. Regardless of course structure(s), CATOP

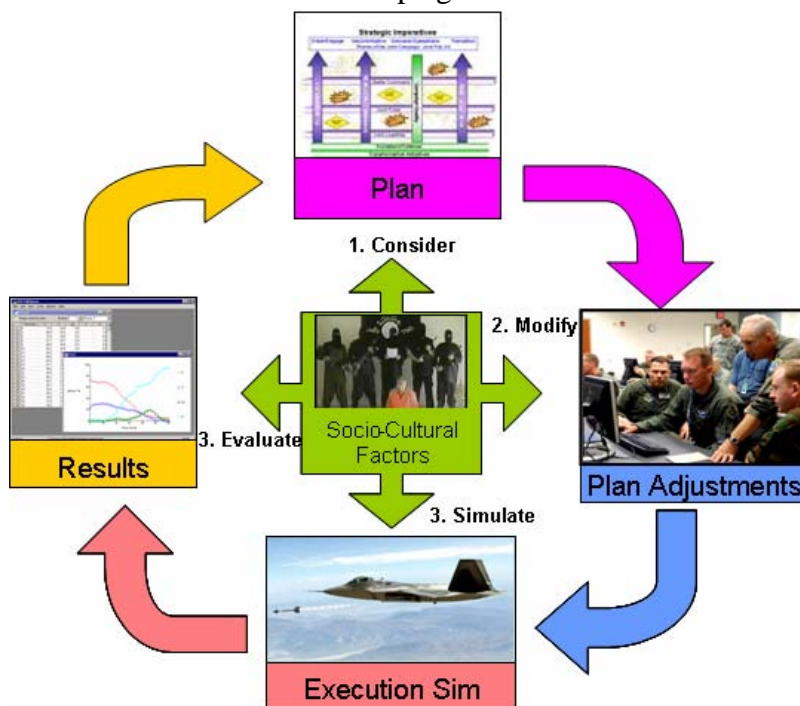


Figure 1. CATOP Learning Cycle

teaches AOC planners how to recognize and mitigate effects of socio-cultural characteristics during the JAEP. The socio-cultural factors initially included within CATOP have their roots in previous conflicts as well as leading cultural research.

Socio-Cultural Factors that Impact Military Operations

To identify socio-cultural factors that impact military operations ongoing research from recognized experts, historical military observations, and the Team's experience in using socio-

cultural factors to create realistic asymmetric adversaries for military simulations were leveraged. Research revealed state-of-the-art in current approaches for classifying and measuring socio-cultural factors from experts such as Hofstede, Klien, and House were based on business interests, often funded by large multinational corporations who must understand the mindset of employees distributed throughout the world. However, it became clear that the factors identified by experts relate to populations in general and transcend specific domains (as one would expect, based on the intrinsic nature of culture). In our research, we narrowed the list of possible factors down to what we term the “Elite Eight,” which is a combination of socio-cultural factors identified by experts in the field and two additional factors we felt were crucial for planning military operations. Ultimately, we decided to use a subset of **Klein’s 8 dimensions** (Klein 2004) (Time Horizon, Achievement vs. Relationship, Mastery vs. Fatalism, Tolerance for Uncertainty, Power Distance, Hypothetical vs. Concrete Reasoning, Attribution, and Differentiation vs. Dialectical Reasoning), **Hofstede’s 5 independent dimensions** (Hofstede 2005) (Power, Self, Gender, Predictability, and Time), and **2 additional factors** we felt needed to be addressed (Religious Reliance and Group Pride). These Elite Eight factors form the starting point for training and applying socio-cultural considerations to the AOC planning process, but the CATOP program is not hardwired to these factors. The list of socio-cultural factors desired for consideration may change as our tactics and adversaries evolve. The current list of the Elite Eight is depicted in table 1.

Socio-Culture Factor	Description
Time Horizon	Describes how far ahead people set goals and look to justify their actions. Present-horizon groups will look at short-term answers, even at the expense of a potentially better long-term answer. Their world is rapidly changing and they have learned not to rely on predicted future success. Future-horizon groups, on the other hand, will sacrifice short term success for long-term prosperity. Their experiences lead them to believe the future is fairly stable and predictable.
Mastery vs. Fatalism	A mastery orientation assumes people are dominant over nature. They do not believe in destiny, but think it is their decisions that will determine their future. The fatalism view is one that assumes little control over the external factors in one’s life. To try to control these destined external factors would be ineffectual or even detrimental.
Masculinity vs. Femininity	Refers to the distribution of roles between the genders in a given group. The more masculine groups tend to downplay the role of women in society; women may be restricted in where they can go or what they can do. Men are the dominant figures in decision making. A feminine society is not the opposite of a masculine society, but, women are seen as equals to men and will hold positions of power and prestige.
Tolerance for Uncertainty	The extent to which those in a group can tolerate instability. A group with a low tolerance for uncertainty will resist change and are comforted by detailed plans and procedures. A group with high tolerance for uncertainty is comfortable with change. They are more likely to excel in an environment that allows flexible thinking.
Power Distance	The extent to which a group expects the uneven distribution of power. Low power distance groups would evaluate ideas and solutions based on merit as opposed to rank or prestige of the proposer. High power distance groups place more emphasis on a person’s position than the merit of his/her ideas.
Individualism vs. Collectivism	The degree to which individuals are integrated into groups. On the individualist side we find societies in which the ties between individuals are loose: everyone is expected to look after him/herself and his/her immediate family. On the collectivist side, we find societies in which people from birth onwards are integrated into strong, cohesive in-groups, often extended families (with uncles, aunts and grandparents) which continue protecting them in exchange for unquestioning loyalty. The word 'collectivism' in this sense has no political meaning: it refers to the group, not to the state. Again, the issue addressed by this dimension is an extremely fundamental one, regarding all societies in

	the world. To highlight the distinction from other types of groups, we looked at nationalism and tribalism. While there are many definitions of Nationalism, the following seems to be most useful for our purposes. It is an ethno-political ideology that sustains the concept of a nation-identity for an exclusive group of people. It is the discrete or implied doctrine which holds the preservation and independence of its distinct identity, in all its aspects, and the "glory and well-being" of the nation as core aspects of its fundamental ethos. Tribalism, on the other hand, is a cultural practice of behaving in a manner to benefit one's own family or tribe, rather than doing what one individually believes is right, especially with respect to supporting political or public policy.
Religious Reliance	The degree to which a group relies on religious teachings in their society. A group that is highly reliant on religion will probably have a single recognized religion, laws to ensure compliance, and religious leaders with great power in the government. Groups with low reliance on religion tend to accept other religions, try to keep government out of religious discussions, and tend to separate religion from the governing body.
Group Pride	The degree to which a group is affected by their pride and loyalty to the group. A group with high Group Pride will tend to put their group's culture, history, and pride above all else. Loyalty to the group's history and culture supersedes individual desires. Those with low Group Pride will tend to make decisions based on current information and future desired state rather than tie themselves to the group's history.

Table 1. Socio-Cultural Factors ('Elite Eight')

Historical Perspective on the Elite Eight Factors

As discussed in the following examples, to validate the Elite Eight we retrospectively applied them to recent conflicts. The results indicated knowledge and application of these factors in the planning stages was not adequately considered, and lends further credence to principles behind CATOP.

Vietnam

"...If each war is different, then each war requires specific and detailed analysis of each of the 'peculiar political soils of individual cultures.' ...the US did not understand the willingness of the PAVN [People's Army of Vietnam] to fight a protracted war, did not understand the emphasis the PAVN put on organization, and did not understand the culture of the Vietnamese people. During this conflict, General Westmoreland, when asked at a press conference what was the answer to insurgency, he replied, 'Firepower.' Indeed, this focus on firepower and attrition of the enemy allowed the US Army to kill many Viet Cong, but 'it never denied the enemy his source of strength - access to the people.'" (Anderson 2004) This is a good example of the *Time Horizon* characteristic. The Vietnamese are a future horizon group and are willing to sacrifice short-term comfort for the long-term goal. They also have very strong Nationalism and Group Pride as evidenced in the quote below:

"...The lack of cultural knowledge caused U.S. servicemen to deface valued ancestral artifacts and conduct themselves in a manner that caused a large number of the non-combatant population to side with North Vietnam. The U.S. never realized that, a culture immersed in centuries-old struggles against foreign rule made recruitment much easier for the North Vietnamese leadership. Throughout most of Vietnam the feeling was, 'We must fight for our country....We must fight the Americans... because their presence is destroying our native land...culturally and morally.'" (Anderson 2004).

Somalia

“A National Defense University publication, *Somalia Operations: Lessons Learned*, authored by US Army Colonel Kenneth Allard illustrates some of the cultural challenges of conflict. Allard explained that ‘their culture stresses the idea of ‘me and my clan against all outsiders,’ with alliances between clans being only temporary conveniences. Guns and aggressiveness, including the willingness to accept casualties, are intrinsic parts of this culture, with women and children considered part of the clan’s order of battle.’ While U.S. planners and operators were aware of this culture at varying levels of understanding, there were shortfalls in translating this understanding into predictive intelligence. Allard indicated this deficiency when he wrote: ‘The Somalia experience underlines the importance of knowing the country, the culture, the ground, and the language as a pre-condition for military operations.’” (Gordon 1995). This is an excellent example of where Individualism vs. Collectivism should have been considered. The US planners did not realize how strong the collective loyalty to the clan was and how it should shape their planning.

Operation Enduring Freedom

“The Taliban are adversaries of the United States largely because they have been, and remain, allies of al Qaeda. They are not, however, agents of global terrorism. They are a regional, religious-based faction that gained and lost control of most of Afghanistan. The Taliban have unity of doctrine (Deobandist) and a high degree of ethnic homogeneity (Pashtun)...The organization, with its hard-core leadership and henchmen, retains residual support among the Pashtun tribes of Afghanistan and Pakistan. However, it continues to lose numbers through members returning to their tribal obligations and primal allegiance. The progress of Kabul’s recently initiated “Reconciliation Program” should offer many examples of how wayward kinsmen are coaxed back into the tribal fold.” (Jandora 2005) Emphasis on the Religious Reliance factor would have helped this effort in the planning stages. Certainly US planners understood the religious fanaticism of the Taliban, but they could have better used this knowledge in planning to anticipate how the Taliban would react to specific military actions.

Operation Iraqi Freedom

“...The values, beliefs, assumptions, and perceptions of former Iraqi leader Saddam Hussein contributed to behaviour that helped create and reinforce a social hierarchy of patronage. At the same time, the rule of law, the repressive nature of the regime, and the changing patterns of a collective society over a thirty-year period, all contributed to the political institutions as they were operating when the U.S. began OIF in 2003. The above also contributed to the perceptions of the Iraqis at the meso- and macro-levels of society. The U.S. attempted to impose its own version of law and order. However, when it initially decided to dismiss the Iraqi Army and bar Ba’ath party members from participating in management and reconstruction, it created an institutional vacuum. This was due to the previous cultural variables and the attempt to restructure society and institutions in a manner not familiar to Iraqis. The U.S. also did not have the security needed to maintain law and order; or the ability to garner local or national legitimacy based on Iraqi values, traditions, beliefs, and perceptions. In addition, the U.S. did not consider the view of the U.S. by Middle East populations, and how that might impact operations when trying to ‘establish democracy’ in Iraq.” (Chandler 2005). A study on the Iraqi’s Tolerance for Uncertainty would have helped significantly in this conflict. Their low Tolerance for Uncertainty

meant they were comforted by stability, which was certainly not the case after the invasion. Perhaps US planners using socio-cultural considerations would have recommended a more structured approach to the transition.

Each one of the preceding examples demonstrates negative effects socio-cultural factors can have on military operations if not properly considered during planning stages. This type of historical analysis is typical of the training currently received on socio-cultural considerations. CATOP breaks that tradition and focuses on understanding the effects of the most critical socio-cultural factors on an EBP. The CATOP prototype demonstrates that training the consideration of socio-cultural factors during the planning process is not only feasible, but extremely effective.

Training the Application of Socio-Cultural Considerations in Planning

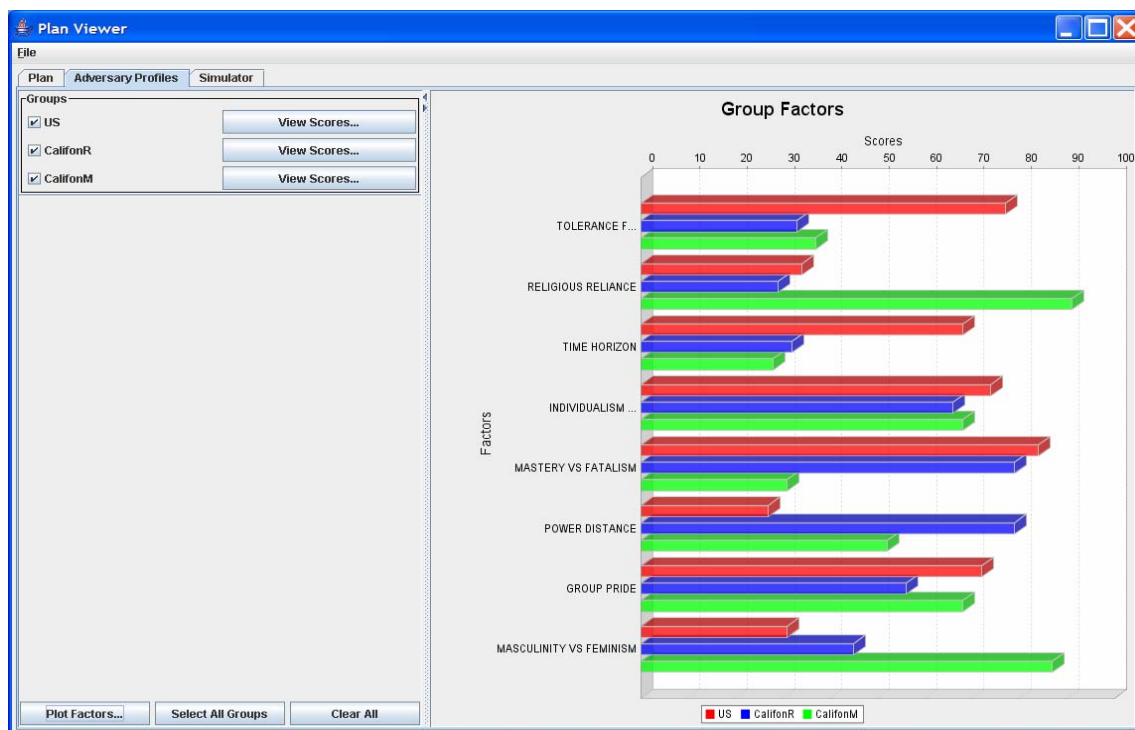


Figure 2. Socio-Cultural Factors Comparison – Learning Cycle ‘Consider’

To prevent issues such as those discussed in previously in the historical perspective, CATOP teaches application of socio-cultural considerations up front – during operational planning. A key benefit of CATOP in the training process is the ability for students to continue the cycle of consider-modify-simulate-evaluate until they better understand the effects of the socio-cultural factors. They can review an established effects-based plan and apply their learned knowledge of socio-culture factors to make changes. Students are able to change operational and tactical objectives based on the adversary’s socio-cultural factors and see the effects of those changes on the simulated outcome. Figure 2 is a screenshot of the prototype program that shows the Elite Eight scores, or relative rankings for the groups selected. Using this knowledge, students modify the plan (e.g. move priority of objectives, add and delete tactical tasks to objectives, etc.) and then execute the simulation. A key feature of Figure 2 is that it depicts the differences between U.S. socio-cultural values and the other groups. This is important because it indicates where po-

tential bias is in the plan. Those socio-cultural factors with the greatest deltas are where the expected outcome of the plan execution likely differs the greatest from the actual results.

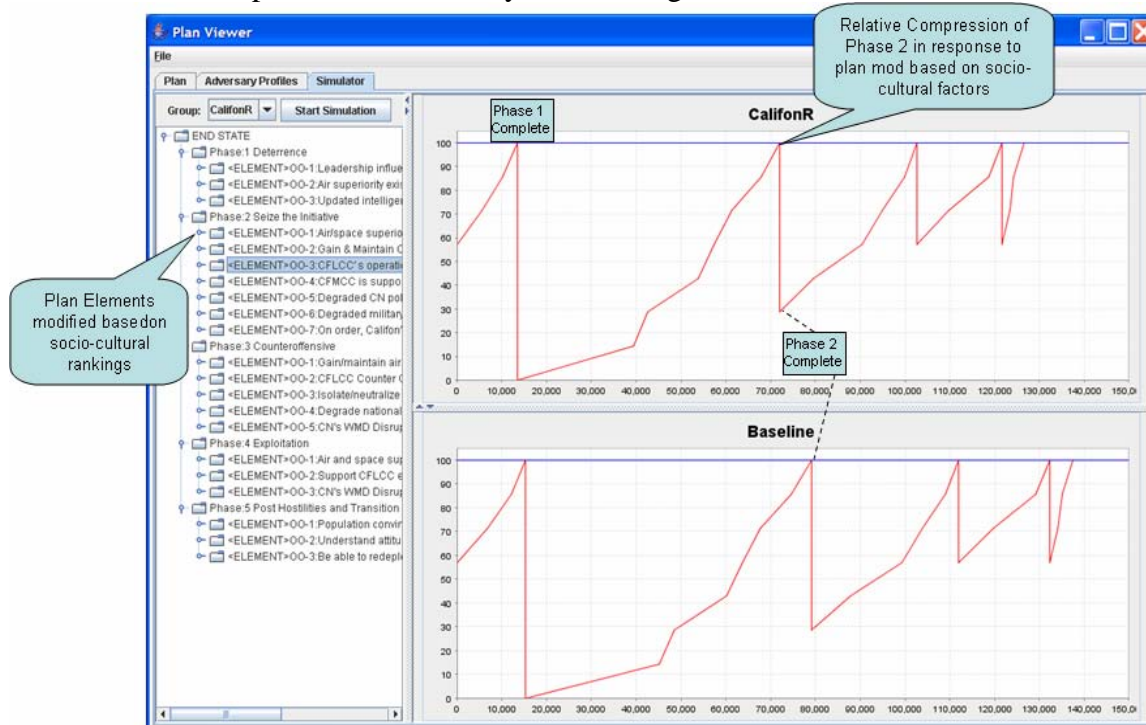


Figure 3. CATOP Prototype - Learning Cycle Evaluate

After the socio-cultural differences have been studied, the student moves to the plan and implements changes based on their socio-cultural training that they feel will have the greatest beneficial impact on the plan. The modified version of the plan is executed via simulation and compared to the same simulation run on the original plan. This enables students to understand the effects socio-cultural factors have on the plan. Figure 3 is a screenshot from CATOP showing the differences between execution phases of the two plans. The bottom graph is for the baseline plan without modifications for socio-cultural considerations, and the top graph is for the plan with adjustments made based on socio-cultural considerations.

As can be seen in this example, Phase 2 of the modified plan appears to conclude earlier than in the original plan. This implies adjustments made to account for the socio-cultural factors of the adversary were appropriate and effective.

The peaks represent reaching 100% of the objectives for the respective phase. For example the start of the graph shows the progress toward completing phase 1, then the chart drops down to the starting point of phase 2, and so on. A key feature of this particular graphical approach is that it provides a good overview of the campaign, but still allows students to differentiate among phases within the overall plan. For example, there may be cases where the total number of days for the campaign is the same both before and after applying socio-cultural considerations, but it may be that Phases 1, 2, and 3 were compressed and Phases 4 and 5 expanded. With this in mind, it becomes obvious that the display should provide 'drill-down' capability into each phase so students can investigate the differences when socio-cultural considerations are included at a sample shown in Figure 4.

finer level of granularity. Graphs that depict drill-down into each Phase were also tested, with

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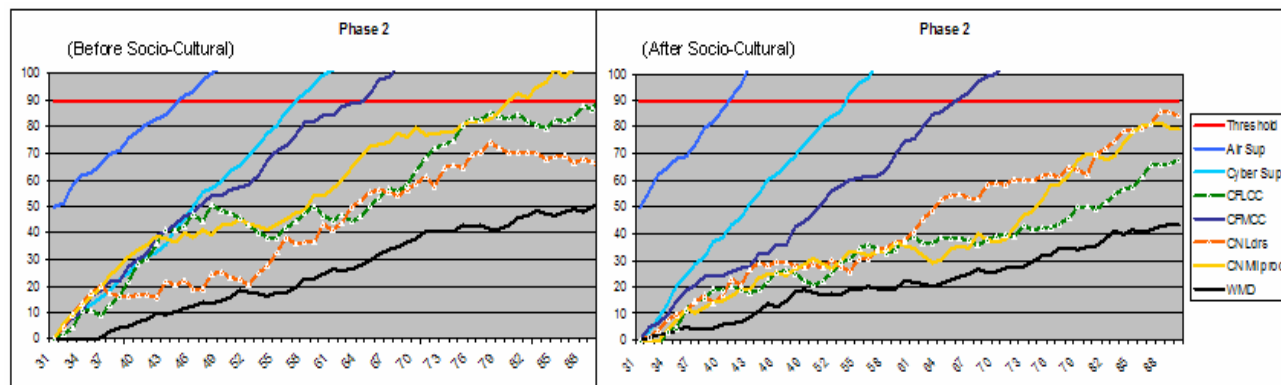


Figure 4. Sample Output of Before/After Graphs by Phase

Ultimately CATOP will have the ability to drill down to the desired level of detail to ensure a thorough understanding of the effect socio-cultural factors have on an EBP. The cyclic nature of a CATOP-based training program ensures students can continue to perform trial-and-error type inputs until they achieve an appropriate level of understanding. Additionally, CATOP supports rapidly changing adversaries, resulting in a new Elite Eight scores and an entirely new problem set. After several iterations with several different adversaries, it will become evident to the student which socio-cultural factors affect which parts of the plan and how the negative effects can be mitigated. The result is an operational level planner who understands the affect socio-cultural factors have on a plan, can identify those factors that are the most critical, and immediately recognizes those elements of the plan that should be scrutinized to ensure the desired operational objectives can be met in the most efficient and effective manner.

Future Directions

CATOP addresses a critical void in the training curriculum of today's planners. Training schools have significant investment in their training programs. The modular net-centric architecture in CATOP maximizes use of existing assets and ensures a smooth integration with, and transition into, the training community.

Ultimately, the distinction between training and operational environments becomes blurred in terms of CATOP's potential. The capabilities that make CATOP uniquely suited to training students on applying socio-cultural considerations to JAEP planning process also make it applicable to deployment within the AOC. The ability to simulate a plan in near real-time is a valuable commodity to the AOC planning community. A key problem with the current planning process is that a campaign is considered as complete when the plan's operational objectives are complete. However, this assumes the plan is exactly correct in its interpretation of U.S. goals (consider the case in the plan for OIF vs. the actual state of the conflict). Transitioning CATOP to operational use will support converging plan development with true operational objectives. CATOP has the potential to become an integral part of the AOC Weapon System. CATOP trained AOC planners will develop plans that appropriately consider socio-cultural considerations, and feedback from the battlespace on actual actions will highlight divergence in the plan early on.

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Biography

Armin A. Blueggel

Lt. Armin Blueggel is a Behavioral Scientist with the Air Force Research Laboratory, Human Effectiveness Directorate, Mesa AZ. As the Psychological Operations Research Team Lead, Lt Blueggel is deeply involved with developing and transitioning socio-cultural awareness training into AOC operations.

Lee S. Krause

Mr. Krause has over 20 years of software experience, on both large and small programs that represent full software lifecycle development experience. His areas of expertise revolve around developing techniques to process fusion-based data into knowledge and leveraging it to support adversarial modelling of real world adversaries. Mr. Krause has extensive background in military strategic, operational, and tactical planning gained from his 20+ years, and is well versed in all areas of adversarial modelling.

Gary E. Aldrich

Mr. Aldrich is currently a Senior Systems Engineer with Securboron, having recently culminated a distinguished military career. Much of his recent success was in coordinating the efforts of training teams comprised of instructors and simulation personnel that would train an entire AOC on the road. The most recent example was when he led a team of 60+ personnel to Ramstein Air Base to train the USAFE AOC during AUSTERE CHALLENGE 06. This event included over 1,000 AOC personnel in a week long scenario performing all the functions of the AOC. It included a Crisis Action Planning event during which Mr. Aldrich helped instruct the Joint Air Estimate Process to the AOC Strategy team. He also oversaw the models and simulation controllers, which allowed him great insight into both the training and simulation pieces of the scenario. Mr. Aldrich has attended the following AOC courses: CWPC, JAC2C, C2WAC, and JSSC, and spent the last several years working with, training, and leading Air Operations Center personnel.